

**REMARKS**

Applicants thank Examiner Mohaddes for the courtesies she extended during the interview held on July 26, 2011. During the interview, the Examiner explained that the claims currently are not sufficiently limited to the types of materials that result in the claimed amount of unfreezable water. Further, it was her opinion that since the prior art broadly discloses a conductive polymer and a crosslinking polymer, the resulting claimed amount of unfreezable water would be inherent. She said that in order to further progress this application forward, we need to more narrowly define conductive polymer A and crosslinking polymers B.

Claims 1, 3-9, 12-14 and 16-17 stand rejected under 35 USC 102(b) as being anticipated by Cabasso. Claims 1, 3-9, and 12-17 stand rejected under 35 USC 102(e) as being anticipated by Prakash. Claims 1, and 3-11 stand rejected under 35 USC 102(b) as being anticipated by Campbell. Claims 1, 3-14 and 16-17 stand rejected under 35 USC 103(a) as being unpatentable over Campbell in view of Cabasso. Claims 15 and 18 stand rejected under 35 USC 103(a) as being unpatentable over Cabasso in view of Muller. Claims 15 and 18 stand rejected under 35 USC 103(a) as being unpatentable over Campbell in view of Cabasso and Muller. Claim 18 stands rejected under 35 USC 103(a) as being unpatentable over Prakash in view of Muller. These rejections are respectfully traversed.

Claim 1 is the only independent claim in this application and has been amended to include the features of claim 3 and 9. Accordingly, claim 1 now specifies that the proton conductive polymer (A) is a non-perfluorinated proton conductive polymer, and said cross linking polymer (B) comprises a moiety selected from the group consisting of a radical polymerizing polymer, an epoxy based polymer, a melamine based polymer, a phenol resin based polymer, a urethane based polymer, a urea based polymer and an inorganic cross linking polymer. As described in the specification, the claimed combination of polymers can be used to produce a polymer electrolyte in which "a ratio of the amount of unfreezable water, represented by formula (S1), in said polymer electrolyte is no less than 40 wt% and no greater than 100 wt%, wherein the ratio of amount of unfreezable water (S1) = (amount of unfreezable water) / (amount of low melting point water + amount of unfreezable water) × 100 (%) and wherein the ratio of the amount of unfreezable water in the polymer electrolyte to the weight of the polymer electrolyte when dried, which is represented by

formula (S2), is no less than 20% and no higher than 200%, wherein the content of unfreezable water (S2) = (amount of unfreezable water in polymer electrolyte) / (weight of polymer electrolyte when dried)  $\times$  100 (%)."

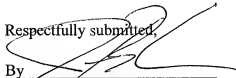
The prior art does not disclose using the specific combination of polymers to produce a polymer electrolyte that has water with the claimed "state of existence," such that the claimed amount of unfreezable water (S1) and content of unfreezable water (S2) are satisfied. The prior art also does not suggest any reason to choose specific combinations and amounts of a proton conductive polymer (A) that is a non-perfluorinated proton conductive polymer, and a cross linking polymer (B) comprises a moiety selected from the group consisting of a radical polymerizing polymer, an epoxy based polymer, a melamine based polymer, a phenol resin based polymer, a urethane based polymer, a urea based polymer and an inorganic cross linking polymer that result in the claimed amount of unfreezable water (S1) and content of unfreezable water (S2). Accordingly, the rejections of claims 1 and 3-18 should be withdrawn.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **360842012600**.

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Respectfully submitted,



By

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